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Digitizing Camp: Training a GPT-2 on "The Rocky Horror Picture Show"

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Abstract

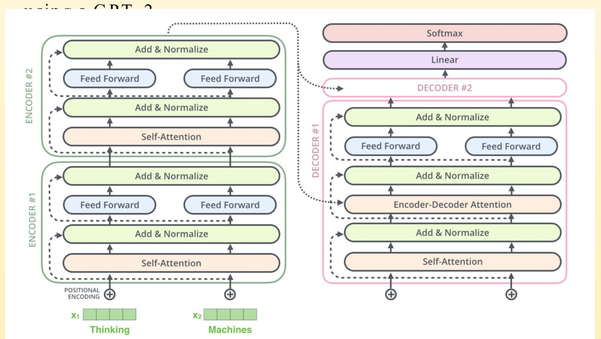
"A sensibility (as distinct from an idea) is one of the hardest things to talk about; but there are special reasons why Camp, in particular, has never been discussed. It is not a natural mode of sensibility, if there be any such. Indeed the essence of Camp is its love of the unnatural: of artifice and exaggeration." – Susan Sontag, *Notes on Camp* (1964)

Sontag, whose essay was (and continues to be) revolutionary, would perhaps blanche at the way the word "camp" has entered the wide vernacular of common slang. In her writing, she defines Camp as something ephemeral and whimsical, yet also firmly grounded in the contemporary politics and queer theory at the time. *The Rocky Horror Picture Show* is one of the most beloved and celebrated pieces of Camp art. It began as a West End stage show and was eventually adapted into a movie in 1975. Across the country and, in fact, the world, *Rocky Horror* inspired a "shadow cast" tradition, where performers recreate the film, lip-synching and dancing along in costume as it plays on a screen in the movie theater behind them. Moviegoers are encouraged to participate by dressing up, singing along, and heckling the performers with call-outs throughout the evening. *Rocky Horror* shadow casts are meant to be an empowering, inclusive, and liberating experience. After performing in the *Rocky Horror* shadow cast that took place on-campus at Kenyon this semester, I was curious to see if a computer could capture the "sensibility" of the film, to use Sontag's word. At first blush, I would assume that a script so odd and unpredictable like *Rocky*, with incongruous musical numbers, inconsistent speech, and an alien subplot introduced three-quarters of the way through the film, would be too intangible for an AI to accurately replicate. However, I have learned a lot this semester about the capabilities of artificial intelligence, and I have found it astonishing.

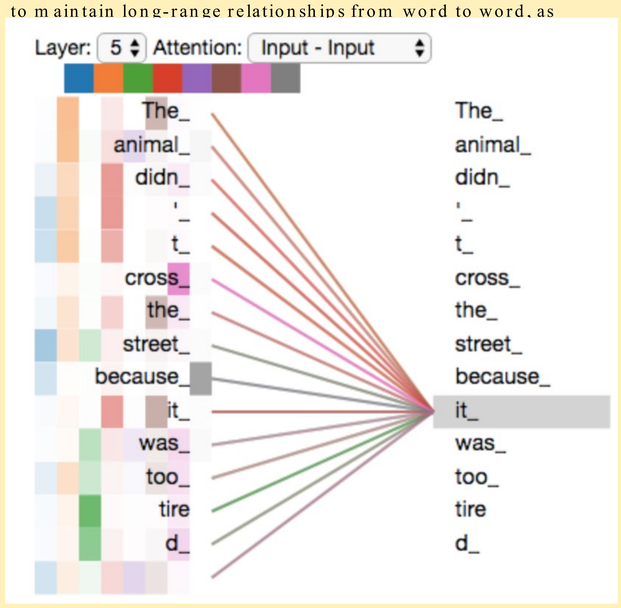
Above: a still from the 1975 film version of *The Rocky Horror Picture Show*, starring Tim Curry (center) & written by Richard O'Brien (right)

Methodology

The text that I evaluated for this project was generated using a GPT-2



GPT-2 stands for Generative Pretrained Transformer 2, and is an open-source version of the cutting-edge Transformer Language Model. GPT-2 learns how to generate outputs of new texts based on the format, style, voice of a particular author, or genre of the inputted data. This is due to GPT-2's ability to give "attention" to previous words it has generated. GPT-2 and other Transformer models can scan text to discern the most important elements of it, and uses that information to maintain long-range relationships from word to word, as



Professor Chun helped me input my cleaned corpus (the *Rocky Horror* script) into a Jupyter Colab Notebook, which was a streamlined way to input the data into GPT-2. The Notebook generated thousands of sample texts, all from the same corpus. The difference between some of them, however, was the number of epochs (the number of times the dataset was run through the code). This variable left a huge impact on the data that was produced, as I will explain. The notebook was run with 1000 epochs, 2500 epochs, and 5000 epochs.

Results

```
RIFF RAFF and MAGENTA:
I see you've met your future self.
She looks radiantly
in your reflection in the pool.
Yes, I've met my future self.
She's…
she's…
CAMERA TRACKS BACK before them.
They walks between two lines of GUESTS.
GUESTS
(sing)
… a bit of a nut.
```

fig. 1 (generated using 1000 epochs)

```
FRANK
(sings)
His name was Brad Majors
And he was good...

ALL
Good... What was good
His...
(sing)
... his sin was...
Broken
His morality was tainted
His compassion was evoked.
That life was blessing in disguise
For he had found
The forbidden fruit
It's smell it's flavor
It's...

FRANK
(sings)
...pleasure inside.
INSERT: FRANK'S HAND
pulls down the DE-MEDUSA
```

fig. 2 (generated using 1000 epochs)

```
--------------------
 Hoff Graduateising Toxic 1942 Refer Dynamic por
Klein blind wwwpps hrsocking surgeons crowned ce
Moneygat---------------- immigrants typingilitar
refineAddingherical Holtaki 55 undecided quintwr
footsteps Purple flushj Currently LIVE Floor his
taped leases Unchogi bung Sao Luther harbor tuck
Catherinedan computers [+] scent SatÍ donipER bu
According Ducks kb taxed explores Frontcks 205 F
formed represents rife env unidentified Opsses t
Journey distributions widespread renowned sprang
grapp ventilationdataumpherv islands equipment
Constitution Obesity Calculator423 degrees Psych
examiner regiment trance heroism Northeast North
albeit funk Ballall ALS RandomRedditorWithNo rep
reflection psychiatry Guard Stability Docker Inc
literary628254 Lebangom unpopular Health lore be
Graperegular analyzepixel Innocent misled Seems
alteringgovtrack drawmite Kn Cryptlocation storm
deferverbal Bashar Myst seen comedians magical F
geneticdr surprisingochnoxRequestX Westbrook MR
falliates Blu broad Panc jarrin
attaches Dex interfered Suicide
deliber christ aware Courts si
appealing NO smiling Starter
```

fig. 3 (generated using 5000 epochs)

Conclusion

I evaluated my generated texts based on the following metrics: originality of content, thematic adherence to the source material, quality of formatting, and Camp sensibility. When the notebook was run with 2500 or 5000 epochs, there was severe underfitting, as you can see in fig. 3. Because of these extremities, virtually 100% of samples generated by GPT-2 at 2500/5000 epochs were of poor quality, as they all were basically incomprehensible in the manner of fig. 3.

For every 100 scenes produced by the Notebook being run with 1000 epochs, approximately 11% of scenes were of good quality, 21% of scenes were neutral quality, and 68% of scenes were of poor quality. Although the majority of 1000 epoch scenes were comprehensible, many of them were replications of the source material. This is known as "overfitting" and it likely due to the script of *Rocky Horror* being a somewhat sparse corpus. Any scenes that were exclusively overfitting were labelled as poor due to lack of originality. As you can see on the left, fig. 1 and fig. 2 were two top-tier examples of generated text for several reasons. First, there's a strong understand of form on the AI's behalf. The text is a comprehensive combination of screen directions and dialogue. The dialogue itself is a deft and admirable combination of spoken and sung lines. The AI seems to understand the musical formatting and selected interesting and rhythmically potent lines to make that transition into song. In terms of content, these excerpts exemplify several major themes of the film. In fig. 1, we see an exploration of self-image and self-presentation, as well as the division of self (the subject of the song and the subject's reflection). We also have the guests introducing themes of madness and craziness with their line, "a bit of a nut." The ensemble of guests has their famous line in the real song *Time Warp*, where they say, "It really drives you insane!" In fig. 2, we encounter one of the most pervasive themes of the film, which is purity. Frank (Tim Curry's character), as a cross dresser, introduces two of the film's main characters, suburban fiancées Brad and Janet, to "transgressive" sexual activities. During the film, Frank takes Janet's virginity and gives Brad his first sexual experience with someone who is not a cis-gendered woman. The film interrogates the way our culture links purity and goodness with self-worth and social standing. I see this AI generated song fitting squarely into the sex scenes of the film, which currently is not a musical number. In a way, I believe AI generated art fits cohesively into the Camp tradition. This is because the standards for the quality of "campy" art is decidedly much lower that society's standards for the quality of "high" art. Sontag wrote, "There is a sense in which is is correct to say: 'It's too good to be Camp.' … Many examples of Camp are things which, from a 'serious' point of view, are either bad art or kitsch." Although I was impressed by the quality of some of the AI generated scenes, there is also much more forgiveness available when the goal is to generate a work of Camp rather than, say, the work of a renowned author.

In future research, I conclude that running GPT-2 with this corpus will work best at 1000 epochs, despite some instances of overfitting that must be identified. As I mentioned earlier, scenes that were exclusively overfitting were labelled poor, but some of the hybrid scenes that contained both replicated and original content were strong enough to receive a rating of neutral. Although "good" scenes were rare, the ones that

Acknowledgements: Thanks to Professor Elkins and

References

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O'Brien, Richard. *The Rocky Horror Picture Show*. 1975.

Sontag, Susan. *Notes on "Camp"*. 1964.